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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,515	10/10/2003	Atsushi Terahara	Q77875	2950

23373 7590 06/23/2005

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WASHINGTON, DC 20037

EXAMINER

ASINOVSKY, OLGA

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 06/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/682,515

Applicant(s)

TERAHARA ET AL.

Examiner

Olga Asinovsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 05/02/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

The terminal disclaimer filed on 05/02/2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent 6,761,989 has been reviewed and is accepted. The terminal disclaimer has been recorded.

The obviousness-type double patenting rejection of claims 1-9 over claims 1-8 and 11 of the U.S. Patent 6,761,989 is overcome in light of a proper Terminal Disclaimer.

U.S. Patent No. 6,761,989 having the priority date of Dec. 22, 2000 is available as a prior art.

1. Claims 1-3 and 5-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Terahara et al U.S. patent 6,761,989.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Terahara discloses a block copolymer having a specific combination of blocks wherein one or more blocks have sulfonic acid groups and one or more blocks have substantially no sulfonic acid group, and at least one block among all blocks is a block having aromatic rings in the main chain thereof, col. 1, lines 54-63. The block containing sulfonic acid groups composed of polystyrene is represented by the general formula (1), col. 2, lines 40-50, the definitions for X are readable in applicant's claimed (1) formula. The block containing sulfonic acid and composed of an aromatic group is readable in applicant's claims 1-3. In Terahara invention the other block being free from an acid group is represented by the general formula (4), col. 5, lines 52-67. The present claims 1-3 include any block polymer being substantially free from acid group. The block copolymer in Terahara is readable in the present claims 1-3. The block copolymer can be used as a polymer electrolyte in a fuel cell referring to as fuel cell polymer electrolyte film, col. 8, lines 52-55. A film having a thickness from 10 to 200 microns is readable of being the polymer electrolyte membrane, col. 9, lines 12-16, for the present claims 5-6 and 8. Terahara discloses that a fuel cell can be produced by bonding a catalyst and a conductive substance as a collector on both surfaces of a fuel cell polymer electrolyte film, col. 9, lines 22-38, for the present claims 7 and 9.

2. Claim 4 is rejected under 35 U.S.C. 103(a) as being obvious over Terahara et al U.S. Patent 6,761,989.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art

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only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Terahara has been discussed in the paragraph 1 above. All discussions are adequately set here.

The difference between the present claim 4 and Terahara invention is the requirement in the present claim 4 that the segment substantially free from an acid group comprises a repeating unit represented by the general formula (5) having aromatic rings connected with Z1 and Z2, wherein each Z1 and Z2 independently representing direct bond, -O- or -S-.

Terahara discloses a block containing substantially no sulfonic acid group represented by the general formula (4) wherein the aromatic rings are connected with Z

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and a said Z is  $-\text{CO}-$  or  $-\text{SO}_2-$ , col. 5, lines 52-67. Thus, a said block is poly-aryl-ether ketone, whereas the present claim 4 can include a poly-aryl-ether.

It would have been obvious to one of ordinary skill in the art to consider that a hydrophobic block having substantially no sulfonic group can be formed with any linkage that can work within the same expectation for obtaining the adequate results in the present claim 4. Because the present claim 4 and Terahara invention disclose the analogous properties and the analogous utility of using a block copolymer.

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art has been considered. The closest reference is 2004/0186262. The difference is that the present claims require a segment having an acid group wherein a said segment comprising at least two aromatic groups.

In light of the new rejection this action is not final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

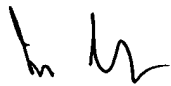
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Olga Asinovsky  
Examiner  
Art Unit 1711

O.A.  
June 14, 2005

  
James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 1700